Gina Harrison
Director
Federal Regulatory Relations

1275 Pennsylvania Avenue, N.W., Suite 400
Washington, D.C. 20004
(202) 383-6423

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March 6, 1995

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

EX PARTE

William F. Caton
Acting Secretary
Federal Communications Commission
Mail Stop 1170
1919 M Street, N.W., Room 222
Washington, D.C. 20554

Dear Mr. Caton:

Re: PP Docket No. 93-253, Implementation of Section 309(j) of the Communications Act - Competitive Bidding 800 MHz SMR

Attached is a copy of an e-mail concerning the above-referenced proceeding sent to Evan R. Kwerel and John McMillan by Professor Paul Milgrom, Stanford University. Please associate this material with this proceeding.

We are submitting two copies of this notice in accordance with Section 1.1206(a)(1) of the Commission's Rules.

Please stamp and return the provided copy to confirm your receipt. Please contact me should you have any questions or require additional information concerning this matter.

Sincerely,

Attachment

cc: Evan R. Kwerel
John McMillan

No. of Copies rec'd 0+1
List A B C D E

Evan Kwerel, John M, 05:25 PM 3/1/95, Pacing the next auction 1

To: Evan Kwerel, John McMillan
From: milgrom@leland.stanford.edu (Paul Milgrom)
Subject: Pacing the next auction
Cc: Bob Wilson
Bcc:
X-Attachments:

Gentlemen:

I now have permission from my client, Pacific Bell Mobile Services, to discuss the matter of auction pacing with you. They will file this e-mail communication as an ex parte filing. However, these are my opinions only; they have not been cleared by PBMS. Moreover, they are intended to initiate discussion, rather than to represent even my own final opinion. Auction rules cannot be set in isolation from one another, and my assessment of particular details depends on the structure of the other auction details. (You guys all know that. I repeat this here only because this document will be part of the public record.)

For the upcoming auctions of BTA licenses, many of the licenses will be much less valuable than in auctions 1, 2 and 4 and many bidders will have much smaller amounts at stake. That affects the cost-benefit analysis of running the auction at low cost and running it to achieve value-maximizing outcomes. It is probably more important for the upcoming auctions to shorten the time required of the bidders, especially if that can be done without too great a cost in terms of efficiency of the assignment.

There are four basic instruments available to speed the auction. One is to have more frequent rounds, although that does seem to me to place an especially onerous burden on bidders interested in multiple licenses, since the licenses cover relatively small areas. A second possibility is to arrange for a revised (discretionary) activity rule and to manage activity requirements to keep prices rising on a large fraction of the licenses for as long as possible. For example, to keep new bids coming totaling 20% of the volume of licenses being offered in each round, the ratio of required bidding to eligibility could be set to 1.2. A third is to have higher initial minimum bids, or to use a device like one that I had previously suggested to count bids below a specified price per MHz-pop as activity only if there were no other higher bids for the same license. The fourth possibility is to use larger minimum bid increments or to use a scale of minimum bids that depend on recent activity. (Peter Cramton had proposed one such scale.)

Whatever the bid increment, the maximum cost in terms of efficiency from an excessive increment is of the same magnitude as the increment. That loss may be tolerable in its own right if the increment is not too large. Moreover, this loss is suffered only if the bidders' values are within one increment of each other. If that is unlikely to happen, then the probability of incurring any efficiency loss is correspondingly low and the expected efficiency loss is very low. The expected effect on auction revenues is also virtually zero in that case, as a simple calculation shows.

The usefulness of an increased bid increment raises the question of whether such efficiency losses as it does cause can be reduced by some small rule modification. I would like to suggest an idea about that for at least initial discussion.

The idea is to use the minimum bid only to compute the bidders' levels of eligibility for future bidding and not to restrict the bids at the current round. For example, suppose that the price of some license is currently 100 and the "minimum bid" is 110. Suppose some bidder has a license valuation of 108. Under current rules, that bidder would be unable to raise the bid without exceeding its value, and that inability could lead to an inefficient assignment of the license. Under this modified rule, the bidder would be allowed to make any bid higher than 100; for example it could bid 105, but the 105 bid would not count as activity for calculating future eligibility. If this was the only bid made by that

bidder, then it would be ineligible to bid again after the current round. If the bid is one of several, the bidder might still retain its future bidding eligibility despite having made an "extra bid" below the minimum increment. In effect, such a rule change would allow bidders to make *additional* bids that would otherwise be impossible; it would not slow the pace of price increase relative to having such bids be disallowed.

Let me emphasize that this change would not completely eliminate the cost associated with larger bid increments. It does not guarantee that the bidder with the highest value for an individual license will acquire it. For example, in the previous illustration, if the bidder of 100 had a value of 107, it could top the bid of 105 with a bid of 106 to acquire the license. A potentially more serious problem is that if the bidder's valuation had been 112, it might have chosen to gamble with a bid of 105 rather than to bid the minimum increment to reach 110, in which case the bidder whose value is 107 could again acquire the license inefficiently.

This rule would have its greatest effect on bidders who are near to reducing their eligibility in the auction, allowing more "final bids." Bidders who are active on a wide range of licenses would be almost unaffected by this extra bidding flexibility.

The change that would be required to implement this proposal would be modest, but changes in something that works well (as I judge this auction has) should generally be limited. If this idea allows a significantly higher bid increment to be viable, then it is certainly worthwhile.